

Title (en)

MULTIPLEXED PROFILING OF RNA AND DNA MODIFICATIONS

Title (de)

MULTIPLEX-PROFILIERUNG VON RNA- UND DNA-MODIFIKATIONEN

Title (fr)

PROFILAGE MULTIPLEXÉ DE MODIFICATIONS D'ARN ET D'ADN

Publication

**EP 4251760 A1 20231004 (EN)**

Application

**EP 21830371 A 20211124**

Priority

- US 202063118409 P 20201125
- US 202163193402 P 20210526
- US 2021060829 W 20211124

Abstract (en)

[origin: WO2022115608A1] Provided herein are compositions and methods for the multiplexed profiling of RNA and DNA modifications across transcriptomes and genomes, respectively. The methods combine molecular recognition of non-canonical features (e.g., base modifications, backbone modifications, lesions, and/or structural elements) of a target nucleic acid with a step of writing the information from this recognition event into the neighboring genetic sequence of the target nucleic acid using a barcode. The resultant barcoded nucleic acids are then converted into sequencing libraries and read by DNA/RNA sequencing methods. This step reveals the sequence of the barcode, which is correlated with the non-canonical feature in the target nucleic acid(s). The high throughput profiling methods described herein allow for localization of one or more modifications in a target nucleic acid. The methods also allow for identification of the nature and location of several or all DNA/RNA modifications in parallel.

IPC 8 full level

**C12Q 1/6804** (2018.01)

CPC (source: EP US)

**C12Q 1/6804** (2013.01 - EP US)

C-Set (source: EP)

**C12Q 1/6804 + C12Q 2525/117 + C12Q 2525/155 + C12Q 2525/179 + C12Q 2525/205 + C12Q 2537/143 + C12Q 2537/164 + C12Q 2563/131 + C12Q 2563/179**

Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)

BA ME

Designated validation state (EPC)

KH MA MD TN

DOCDB simple family (publication)

**WO 2022115608 A1 20220602; WO 2022115608 A9 20230615;** AU 2021385367 A1 20230629; AU 2021385367 A9 20240530; CA 3199189 A1 20220602; EP 4251760 A1 20231004; JP 2023551072 A 20231206; US 11773425 B2 20231003; US 12084713 B2 20240910; US 2022298542 A1 20220922; US 2022298543 A1 20220922; US 2024110222 A1 20240404

DOCDB simple family (application)

**US 2021060829 W 20211124;** AU 2021385367 A 20211124; CA 3199189 A 20211124; EP 21830371 A 20211124; JP 2023555121 A 20211124; US 202217706470 A 20220328; US 202217706493 A 20220328; US 202318479622 A 20231002